

ABSTRACT

A remote computer access facility uses two dedicated computers outside the firewall. To ensure security the system makes use of biometrics features and a one-time password mechanism on top of secure socket layer (SSL) to authenticate a user. The system also provides three layers of security levels for transmission. The first layer establishes an SSL connection, the second layer periodically asks for a one-time password (OTP), and the third layer uses any kind of conventional encryption. The combination of the biometric, OTP and encryption key forms a strong password. The system also uses a mechanism for secure file accesses within the organization based on the security privileges assigned to various users. Based on the user's access privileges, the server side software module sends the requested file in an encrypted form along with the key to decrypt that file – this key is encrypted by the user's strong password.

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